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CENTRAL INTELLIGENCE AGENCY

REPORT NO.

INFORMATION REPORT

CD NO.

COUNTRY East Germany

DATE DISTR. 8 September 1953

SUBJECT Development of the Jaumann Bridge in the Werk fuer Fernmeldewesen HF for Soviet Use in Ferrous Carbonyl Production

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SUPPLEMENT TO REPORT NO.

THIS IS UNEVALUATED INFORMATION

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1. Pertinent orders placed with the HF Plant in Berlin-Oberschoeneweide by Fomichov (fnu) and Trofimov (fnu) of the SCC Karlshorst indicate that the U.S.S.R. has apparently started manufacturing ferrous carbonyl.

2. After the war, amplifying and filtering engineering in eastern Germany depended on imports of ferrous carbonyl from West Germany which were hampered, however, by western trade restrictions. Illegal imports were poor, the quality varied and upon examination, the material appeared to come from semi-finished goods that had apparently supplied without the knowledge of the management. Efforts were taken to manufacture iron dust in East Germany. In view of the importance of the quality of iron dust required for telecommunication engineering, Professor Kersten (fnu) of Jena University, ordered Graduate Engineer Candidate Hiller (fnu) to develop a Jaumann bridge. His results led the Soviets to order that these measuring instruments be developed further.

3. In January 1951, Engineer Karl Langer of the HF Plant received orders to develop the Jaumann bridge further with special emphasis on the most precise practicable determination of the values of w, h and n (eddy current losses, hysteresis, and after-effect). Nine units were ordered, eight of which were to be for the Soviets. After completing these instruments, which together with all records were dispatched to Moscow on 28 December 1952, Langer was ordered in April 1952 to make the bridge automatic, to refine the process, and to equip the device with an optical and a graphic indicator. Langer was given 135,000 eastmarks. The Soviets sold the first instrument for 72,500 eastmarks and allotted an additional 110,000 eastmarks for the further development and an additional 125,000 eastmarks for development work. The latter allotment was not to be used prior to late May 1953, in order to avoid interruption of the work at the end of the fiscal year as a result of a lack of money.

Dr Hildebrand (fnu) and Graduate Engineer Schulz (fnu) of the Treptow Telecommunications Engineering Plant simultaneously with Langer developed a Jaumann bridge which, however, differed from Langer's design. In September 1952, the first iron dust cores produced in East Germany by the Dralowid Plant, were subjected to comparison measurements on the
25X1A Langer bridge in Oberschoeneweide, the Hildebrand-Schulz bridge in Leipzig, and the Stiller bridge in Jena. As they furnished identical results to a

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fraction of a percent, the decision was made that the Langer bridge be constructed. Ten units were to be made for German installations including the Leipzig Telecommunications Engineering Plant, the Gera Condenser Plant, the Dralowid Plant in Teltow, the Ferromagnetic Institute in Jena, the Electrochemical Combine in Bitterfeld, the Leuna Plant, the Central Laboratory for Telecommunications in Treptow, the Kabelwerk Oberspree, HF Plant in Oberschoeneweide and the Electrical Engineering Main Administration., Five units were to be supplied to the Soviets. The delivery was be made by May or June 1953. The Soviets promised that they would place additional orders.

5. When the Soviet ferrous-carbonyl production was discussed during the visit of the Czech experts on 3 November 1952, Wiesner (fnu), representative of the Postal Ministry of Czechoslovakia, without disclosing the source of his information, stated that the Soviets had a pressing plant in Stalingrad. It remained undetermined, however, whether iron dust was manufactured in the U.S.S.R. , although some people believed that ferrous-carbonyl was possibly produced in co-ordination with the nickel carbonyl installation which is based on the Nord process and is located in Petsamo. It was inferred, from the great demand for measuring bridges and the fact that no ferrous-carbonyl was shipped from East Germany to the USSR, that the USSR had no demand.

6. As the Leuna Plant produces 35 tons per month, East Germany is in a position to export.[2] The first orders were placed by Czechoslovakia and Poland.

25X1A 1. [redacted] Comment. A previous report contained information on the visit of Wiesner, who belongs to the Tesla Strasnice plant in Prague-Strasnice.

25X1A 2. [redacted] Comment. A previous report stated that the first experimental quantities of ferrous-carbonyl dust would not be made prior to December 1952.